



Centurion
UNIVERSITY

Lecture 3. Installation, Care and Maintenance of Pipes and Fittings

Vivek Kumar

Assistant Professor

Department of Agricultural Engineering, SoABE,
Centurion University of Technology and Management,
Paralakhemundi

Odisha 761211.

e-mail: vivek.btag@gmail.com; vivek.kumar@cutm.ac.in

Mob. no.+91-6371650970, 9734982094



1. Introduction

2. Installation

1. All process equipment, identified by an equipment number. This should be drawn roughly in proportion and the location of the equipment.
2. All pipes, identified by a line number. The pipe size and material should be shown.
3. All valves control and block valves, with an identification number and size should be shown.
4. Ancillary fittings that are part of the piping system, such as inline strainers, steam traps, with an identification number.
5. Pumps, identified by a suitable code number
6. All control loops and instruments, with an identification number.
 - Sizing of pipe lines
 - Connections
 - Valves
 - Supports

3. Requirements in Pipe lines



4. Instruments and Fittings

5. Maintenance of pipes and fittings

- Worn-out gaskets in pipeline joints should be replaced periodically, before they become brittle, deformed or loose their shape permanently.
- 2. During preventive maintenance inspection, distress cracks on walls and footings near the pipe anchors will indicate improper layout with regard to thermal expansion.
- 3. Check for the supports of the pipelines, whether they firm or if they are dislodged from their installed positions.
- 4. Check if vibrations, expansions caused by the process equipment like homogenizer, Pasteurizer are prevented from being carried on to pipelines connected to them.
- 5. Check, if any modification done like expansion, shifting of equipment are not affecting the pipeline installation, and properly supported and connected without any stresses.



Centurion
UNIVERSITY

Thank You